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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/055,197	01/21/2002	Israel Lifshitz	2649/0K220	5076

7590 12/28/2006

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EXAMINER	
PERILLA, JASON M	
ART UNIT	PAPER NUMBER
2611	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	12/28/2006	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

IV

Office Action Summary	Application No.	Applicant(s)	
	10/055,197	LIFSHITZ ET AL.	
	Examiner	Art Unit	
	Jason M. Perilla	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 January 2002*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-47* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *3-9,12-18,24-29,37-39 and 42* is/are rejected.

7)☒ Claim(s) *1,2,10,11,19-23,30-36,40,41 and 43-47* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *21 January 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-47 are pending in the instant application.

Information Disclosure Statement

2. The information disclosure statements (IDS) are in compliance with the provisions of 37 CFR § 1.97. Accordingly, the information disclosure statements are being considered by the examiner.

Claim Objections

3. Claims 1-47 are objected to because of the following informalities:

Regarding claims 1-11, the following versions of the claims are presented to overcome objections to the claims:

1. Communications method comprising the procedure of:

modulating a second generation carrier signal~~,~~ with a first generation Baseband bandwidth signal having a first generation Baseband bandwidth~~,~~ when transmitting to first generation devices,

wherein the frequency of said second generation carrier signal~~,~~ is an integer multiple of said first generation Baseband bandwidth~~s,~~ away from a first generation carrier signal frequency.

2. The communications method according to claim 1, further comprising the procedure of:

modulating said second generation carrier signal~~,~~ with a second generation Baseband bandwidth signal~~,~~ when transmitting to second generation devices.

4. The communications method according to claim 1, wherein said first generation ~~bandwidth Baseband~~ Baseband bandwidth signal is in digital format.

5. The communications method according to claim 1, wherein said first generation ~~bandwidth Baseband~~ Baseband bandwidth signal is in analog format.

6. The communications method according to claim ~~1~~2, wherein said second generation ~~bandwidth Baseband~~ Baseband bandwidth signal is in digital format.

7. The communications method according to claim 1, wherein said second generation ~~bandwidth Baseband~~ Baseband bandwidth signal is in analog format.

10. Communications method comprising the procedure of:

selecting a second generation carrier frequency for a second generation carrier signal, said second generation carrier frequency being an integer multiple of a first generation Baseband bandwidths~~,~~ away from a first generation carrier signal frequency; and

modulating said second generation carrier signal~~,~~ with a first generation Baseband bandwidth signal~~,~~ when transmitting to first generation devices.

11. The communications method according to claim 10, further comprising the procedure of:

modulating said second generation carrier signal~~,~~ with a second generation Baseband bandwidth signal~~,~~ when transmitting to second generation devices.

Claims 13-16 are objected to for the same reasons as claims 4-7, above.

Regarding claims 19-23, the following versions of the claims are presented to overcome objections to the claims:

19. Multiple generation communications device comprising:

a first signal generator~~,~~ generating a first generation ~~bandwidth Baseband~~ Baseband bandwidth signal having a first generation Baseband bandwidth;

a second signal generator~~,~~ generating a second generation ~~bandwidth Baseband~~ Baseband bandwidth signal;

a controller;

a switch~~,~~ coupled with said controller, said first signal generator, and said second signal generator;

carrier signal generator~~,~~ providing a second generation carrier signal, the frequency of said second generation carrier signal~~,~~ is an integer number of said first generation Baseband bandwidths~~,~~ away from the frequency of a first generation carrier signal;

a modulator~~,~~ coupled with said switch and said carrier signal generator,

wherein said switch couples said first signal generator with said modulator~~,~~ when said controller selects said first generation ~~bandwidth Baseband~~ Baseband bandwidth signal to modulate said second generation carrier signal;

wherein said switch couples said second signal generator with said modulator~~,~~ when said controller selects said second generation ~~bandwidth Baseband~~ Baseband bandwidth signal to modulate said second generation carrier signal; and

wherein said modulator modulates the selected one of said first generation ~~bandwidth Baseband~~ Baseband bandwidth signal and said second generation ~~bandwidth Baseband~~ Baseband bandwidth signal~~,~~ with said second generation carrier signal~~,~~ thereby producing a transmission signal.

20. The multiple generation communications device~~,~~ according to claim 19, further comprising a communication interface~~,~~ coupled with said modulator, said communication interface providing said transmission signal to a network.

21. The multiple generation communications device~~,~~ according to claim 19, further comprising an up-sampler~~,~~ coupled with said first signal generator, said up-sampler up-sampling sampled Baseband data~~,~~ thereby producing multiple copies of said sampled Baseband data.

22. The multiple generation communications device according to claim 19, wherein said controller selects said first generation ~~bandwidth Baseband~~ Baseband bandwidth signal to modulate said second generation carrier signal~~,~~ when transmitting to first generation communication devices.

23. The multiple generation communications device according to claim 19, wherein said controller selects said second generation ~~bandwidth Baseband~~ Baseband bandwidth signal to modulate said second generation carrier signal~~,~~ when transmitting to second generation communication devices.

Claims 24-27 are objected to for the same reasons as claims 4-7, above.

Regarding claims 32, 37, 38, 40, 41, and 43-47, the following versions of the claims are presented to overcome objections to the claims:

32. Multiple generation communications network architecture comprising:

a network;

at least one first generation communications device~~,~~ coupled with said network; and

at least one second generation communications device~~,~~ coupled with said network,

wherein at least one of said at least one second generation communications device comprises:

a first signal generator~~,~~ generating a first generation ~~bandwidth Baseband~~ Baseband bandwidth signal having a first generation Baseband bandwidth;

a second signal generator~~,~~ generating a second generation ~~bandwidth Baseband~~ Baseband bandwidth signal;

a controller;

a switch~~,~~ coupled with said controller, said first signal generator, and said second signal generator;

a carrier signal generator~~,~~ providing a second generation carrier signal, the frequency of said second generation carrier signal~~,~~ is an integer number of said first generation Baseband bandwidths~~,~~ away from the frequency of a first generation carrier signal;

a modulator~~,~~ coupled with said switch and said carrier signal generator;

wherein said switch couples said first signal generator with said modulator~~,~~ when said controller selects said first generation ~~bandwidth Baseband~~ Baseband bandwidth signal to modulate said second generation carrier signal;

wherein said switch couples said second signal generator with said modulator~~,~~ when said controller selects said second generation ~~bandwidth Baseband~~ Baseband bandwidth signal to modulate said second generation carrier signal; and

wherein said modulator modulates the selected one of said first generation ~~bandwidth Baseband~~ Baseband bandwidth signal and said second generation ~~bandwidth Baseband~~ Baseband bandwidth signal~~,~~ with said second generation carrier signal~~,~~ thereby producing a transmission signal.

37. A ~~Backward~~ backward compatible transmitter comprising means for modulating a second generation carrier signal~~,~~ with a first generation Baseband bandwidth signal having a first generation Baseband bandwidth~~,~~ when transmitting to first generation devices, wherein the frequency of said second generation carrier signal~~,~~ is an integer multiple of said first generation Baseband bandwidths~~,~~ away from a first generation carrier signal frequency.

38. The backward compatible transmitter according to claim 37, wherein said means for modulating further modulates said second generation carrier signal~~,~~ with a second generation Baseband bandwidth signal~~,~~ when transmitting to second generation devices.

40. A ~~Backward~~ backward compatible transmitter comprising:

means for selecting a second generation carrier frequency for a second generation carrier signal, said second generation carrier frequency being an integer multiple of a first generation Baseband bandwidths~~,~~ away from a first generation carrier signal frequency; and

means for modulating said second generation carrier signal~~,~~ with a first generation Baseband bandwidth signal~~,~~ when transmitting to first generation devices.

41. The backward compatible transmitter according to claim 40, wherein said means for modulating also modulates said second generation carrier signal~~,~~ with a second generation Baseband bandwidth signal~~,~~ when transmitting to second generation devices.

43. Multiple generation communications device comprising:

means for generating a first generation ~~bandwidth-Baseband~~ Baseband bandwidth signal having a first generation Baseband bandwidth;

means for generating a second generation ~~bandwidth-Baseband~~ Baseband bandwidth signal;

means for controlling;

means for switching~~,~~ coupled with said means for controlling, said means for generating said first signal generation ~~bandwidth-Baseband~~ Baseband bandwidth signal, and said means for generating said second signal generation ~~bandwidth-Baseband~~ Baseband bandwidth signal;

means for generating a second generation carrier signal, the frequency of said second generation carrier signal~~,~~ is an integer number of said first generation Baseband bandwidth~~s,~~ away from the frequency of a first generation carrier signal;

means for modulating~~,~~ coupled with said means for switching and said means for generating a second generation carrier signal, wherein said means for switching couples said means for generating said first signal generation ~~bandwidth-Baseband~~ Baseband bandwidth signal with said means for modulating~~,~~ when said means for controlling selects said first generation ~~bandwidth Baseband~~ Baseband bandwidth signal to modulate said second generation carrier signal;

wherein said means for switching couples said means for generating said second signal generation ~~bandwidth-Baseband~~ Baseband bandwidth signal with said means for modulating~~,~~ when said means for controlling selects said second generation ~~bandwidth-Baseband~~ Baseband bandwidth signal to modulate said second generation carrier signal; and

wherein said means for modulating modulates the selected one of said first generation ~~bandwidth-Baseband~~ Baseband bandwidth signal and said second generation ~~bandwidth Baseband~~ Baseband bandwidth signal~~,~~ with said second generation carrier signal~~,~~ thereby producing a transmission signal.

44. The multiple generation communications device~~,~~ according to claim 43, further comprising means for interfacing with a communication network~~,~~ coupled with said means for modulating, said means for interfacing with a communication network providing said transmission signal to a network.

45. The multiple generation communications device~~,~~ according to claim 43, further comprising means for up-sampling~~,~~ coupled with said means for generating said first signal generation ~~bandwidth Baseband~~ Baseband bandwidth signal~~, said means~~ for up-sampling~~, up-sampling~~ sampled Baseband data~~,~~ thereby producing multiple copies of said sampled Baseband data.

46. The multiple generation communications device according to claim 43, wherein said means for controlling selects said first generation ~~bandwidth Baseband~~ Baseband bandwidth signal to modulate said second generation carrier signal~~,~~ when transmitting to first generation communication devices.

47. The multiple generation communications device according to claim 43, wherein said means for controlling selects said second generation ~~bandwidth Baseband~~ Baseband bandwidth signal to modulate said second generation carrier signal~~,~~ when transmitting to second generation communication devices.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 3-9, 12-18, 24-29, 37-39, and 42 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 4-7, 13-16, and 24-27, the phrases "is in digital format" and "is in analog format" are indefinite because one skilled in the art is unable to determine exactly what properties would make a signal one having a digital or an analog format.

Regarding claims 8, 9, 17, 18, 28, and 29, one skilled in the art is unable to determine how a carrier signal may retain properties such as having a " digital format" or

an "analog format". One skilled in the art would find, conventionally, that an unmodulated carrier signal would retain no such properties. The claim is indefinite because one is unable to determine how the carrier signal may be characterized as analog or digital.

Regarding claims 3, 12, 39 and 42, "the frequency range of at least one instance of first generation basic signal" is lacking antecedent basis, and it makes the claims indefinite.

Regarding claim 37, a single means claim, i.e., where a means recitation does not appear in combination with another recited element of means, is subject to an undue breadth rejection under 35 U.S.C. § 112, first paragraph. In re Hyatt, 708 F.2d 712, 714-715, 218 USPQ 195, 197 (Fed. Cir. 1983) (A single means claim which covered every conceivable means for achieving the stated purpose was held nonenabling for the scope of the claim because the specification disclosed at most only those means known to the inventor.). When claims depend on a recited property, a fact situation comparable to Hyatt is possible, where the claim covers every conceivable structure (means) for achieving the stated property (result) while the specification discloses at most only those known to the inventor.

Claim 38 is rejected as being based upon a rejected parent claim.

Allowable Subject Matter

6. Claims 1, 2, 10, 11, 19-23, 30-36, 40, 41, and 43-47 are indicated to contain allowable subject matter.

7. The following is a statement of reasons for the indication of allowable subject matter:

Claims 1, 2, 10, 11, 19-23, 30-36, 40, 41, and 43-47 are indicated to contain allowable subject matter because the prior art of record does not disclose or obviate the selection of a second generation carrier frequency as an integer multiple of a first generation signal's bandwidth.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following prior art of record not relied upon above is cited to further show the state of the art with respect to backward compatible transmitters.

U.S. Pub. No. 20020015404 to Fisher.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason M. Perilla whose telephone number is (571) 272-3055. The examiner can normally be reached on M-F 8-5 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh M. Fan can be reached on (571) 272-3042. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jason M. Perilla
December 18, 2006

jmp

CHIEH M. FAN
SUPERVISORY PATENT EXAMINER